



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,203	09/21/2005	Richard E Tateson	36-1920	1216
23117 7590 12/11/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER HWA, SHYUE JIUNN	
			ART UNIT 2163	PAPER NUMBER
			MAIL DATE 12/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,203	Applicant(s) TATESON ET AL.	
	Examiner James Hwa	Art Unit 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 25-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/12/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant has amended claims 1-3, 5, 6, 8-11, 14, 17, 22, 25 and 26 in the amendment filed on 9/12/2007. Claim 24 canceled. New claims 27-35 added. Claims 1-23 and 25-35 are pending in this Office Action.

Information Disclosure Statement

2. The information disclosure statement filed on September 12, 2007 is in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been placed in the application file and the information referred to therein has been considered as to the merits.

Response to Arguments

3. Applicant argued that Kramer does not teach the added claimed limitation. In response to applicant's argument, new grounds of rejections are discussed in this Office Action.

Applicant argued that, Kramer fails to teach or suggest receiving user inputs made during a browsing session, and amending score values for attribute data items associated with the display items as said browsing session continues in claims 1, 9 and 26.

Applicant argued that, Kramer fails to disclose the negative and positive concept required in claim 5.

Applicant argued that, Kramer fails to disclose the display includes non-visual elements in claim 7. The Examiner respectfully disagrees.

Examiner addressed all these claimed limitation as discussed in this Office Action below.

Claim Rejections - 35 USC § 112

4. Claims 27-29 objected to under 37 CFR 1.75 as being a substantial duplicate of claims 30-32. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-23 and 25-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (US Patent No. 6,327,574 B1, hereinafter "Kramer") in view of Wang et al. (US Patent Application No. 2002/0174147 A1, hereinafter "Wang").

As to claim 1

Kramer teaches

"Apparatus for selecting items from a product database" as a system, method, architecture and various software products that can augment structured documents that are received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41).

"a display database for storing a set of display items, data-storage means for storing attribute data items each associated with one or more of the display items" as the variable content sections are tagged with variables or expressions, which are evaluated in the context of a client database to produce a description of the actual content to display in that section (column 7, lines 60-63).

Kramer further teaches these selectable content tags will include information which is evaluated with respect to the individual consumer's profile to produce a set of options for which content to present together, with criteria for determining a measure of appropriateness of each option depending on the attributes of an individual viewer (column 8, lines 25-31).

“data-storage means for storing a score value for each attribute data item” as the Illumination Sorter selects and sorts a set of illuminations by measuring each against the data sources, using the matching subsystem to compute a match score for each illumination. Illuminations whose match score is above a threshold associated with each illumination are selected; the selected illuminations are ordered by their match score to form the sorted illumination list (column 23, lines 15-22).

“means for displaying a subset of the display items selected from the display database” as for each variable content section, selecting a subset of the content alternatives for augmenting the section by evaluating the content alternatives with respect to a consumer profile of the consumer, ordering the subset of content alternatives into an order (claim 1; see also figures 3B, 4 and 5).

Kramer further teaches display methods in an illumination process, which augments structured documents being electronically delivered to the consumer with the conditional content, allow for the consumer to view the most appropriate piece of content first, followed by the next most appropriate piece of content if the consumer so indicates, and so forth (column 3, lines 1-7).

“means for amending the score values in response to the user inputs; means for retrieving, from the data-storage means, attribute data items associated with any display item means for retrieving from the display database” as the primary purpose of the TIC data servers are to serve as a repository of software and domain specific data related to the subject matter of reports, such

as product descriptions and vendor contact information. These are represented as standard relational databases with standard web-based interfaces used to populate, query, and modify them. Specifically, there are four types of servers managed by the TIC operator (column 17, lines 53-60).

Kramer further teaches the Illumination Sorter sorts the selected illuminations in an order determined via a match score computed from the three data sources. The sorted illuminations are then presented to an Illumination Display subsystem for presentation to the consumer (column 21, lines 56-61).

“one or more further display items selected in accordance with the score values associated with attribute data items” as the Illumination Sorter includes a Boolean Matching and Metric Matching. The Boolean Matching evaluates the Boolean query used to select all illuminations that do meet the query constraints with respect to the facts in the database or abstracted data from the attribute vector via the Boolean Abstractor (column 23, lines 41-46).

“output means for displaying an output identifying the selected further display item or items” as all illuminations for which the Boolean query evaluates to TRUE are selected from the set of illuminations. The meaning of this result is that such illuminations do match facts or data descriptive of the transactions, interests, preferences, or demographics of the consumer whose computer will potentially be selected for display (column 23, lines 48-53).

Kramer also teaches the merchant chooses to make use of the hierarchical structure of the attribute vector to effect a hierarchical discrimination of its content. The first illumination candidates transmitted to the consumer's

computer. These illuminations will be processed by the Illumination Sorter to determine which categories are most relevant to the consumer. The most relevant illumination will be displayed initially in the illuminated document, with the selected ones of the remaining illumination candidates available to the consumer via the content rotator, and ordered by their relevancy (e.g. match scores) (column 32, lines 45-57).

Kramer further teaches the merchant is now aware of the consumer's interest in children's books, but still does not know which sub-category of children is appropriate. Thus, the second set of candidate illuminations is directed to specific sub-categories within the children category (column 33, lines 4-9).

Kramer does not explicitly teach the claimed limitation "means for receiving user inputs made during a browsing session", "means for amending the score values in response to the user inputs as said browsing session continues" and "output means for displaying an output identifying the selected further display item or items during said browsing session".

Wang teaches

- Guidance defined during the edit session will define what and how information will be presented in derivative content. Derivative content is derived from primary content (e.g., for which the model page is a prototype) by application of guidance defined during an edit session (page 26, paragraph 0159).
- A user may begin a session accessing the Internet via a wireless device and a limited display device user interface, indicate to the browse process that

the session is to continue in audio, and possibly indicate to the audio user interface (e.g., voice browser) that the session is to resume on the limited display device. In an alternate implementation, session switching may include control from time to time by a workstation GUI (page 33, paragraph 0194).

- during a transfer of control, one or more of these access devices or user interfaces may have exclusive control of the session, or may have nonexclusive control (e.g., an input on any user interface is treated as an input for browsing and an output is provided in parallel on all access devices). Output may be provided exclusively to the interface being used in an exclusive manner, or may be provided as indicated by the user on two or more interfaces (page 33, paragraph 0195).
- Browse process responds to user inputs. The user may navigate the Internet in the conventional manner selecting links using user inputs. At any time, the user may desire to continue the session via an audio user interface. To do so, the user may follow a link provided on the limited display device by audio/LDD browse process (page 33, paragraph 0197).
- Compute a score for each candidate and choose the PC node identifier having the lowest score (page 11, paragraph 0096).
- Use of the directory information tree and access protocol facilitates obtaining guidance for the preparation of derivative content as a set of pages. A search for suitable guidance conducted by find guidance process may return a plurality of entries each having a suitable APPLIES_TO_ADDRESS

attribute. Such a search may seek entries in accordance with one or more target attribute values (page 13, paragraph 0119).

- A weighted sum of the extents of matches found may be compared to a threshold numeric value. When the weighted sum exceeds the value, for example, sufficient correlation may be concluded. Probabilities derived from a model are combined in any conventional manner to conclude sufficiency. For example, if matches are found in portions associated with a low probability of change or mismatches are associated mostly with portions that have a high probability of change, sufficient correlation may be concluded (page 14, paragraph 0127).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Wang before him/her, to modify Kramer receiving user inputs and display items during a browsing session because that would allow for frequent changes in the arrangement of content on web pages provided by the Internet as taught by Wang (abstract).

As to claim 2

Kramer teaches

“input means for receiving a user input identifying a first display item selected from the displayed subset, and wherein the score values for each attribute data item can be altered as said browsing session continues in response to such user interaction” as all of the foregoing testing of illuminations

and generation of match scores occurs entirely under the control of the consumer's computer, and thus without the providers of the illuminations having any access to the highly sensitive and private information about the consumer that is contained in the database(column 23, lines 23-28).

Kramer further teaches each element in the attribute vector represents a consumer preference, interest, psychographic, demographic aspect, or alternatively, the probability the consumer is interested in a specific topic, category, and the like. These attributes are updated as a function of a measure of relevancy of a transaction to each attribute (column 24, lines 41-46).

Kramer does not explicitly teach the claimed limitation "the score values for each attribute data item can be altered as said browsing session continues in response to such user interaction".

Wang teaches

At a time after the session is established, voice browse process, performed by voice browser server, requests information expected to be provided by a server on network. The initial request may correspond to a home page (page 6, paragraph 0054).

Wang also teaches a search may seek entries in accordance with one or more target attribute values (page 13, paragraph 0119).

Wang further teaches Compute a score for each candidate and choose the PC node identifier having the lowest score (page 11, paragraph 0096).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Wang

before him/her, to modify Kramer browsing session continues in response to such user interaction because that would allow for frequent changes in the arrangement of content on web pages provided by the Internet as taught by Wang (abstract).

As to claim 3

Kramer teaches

“the means for retrieval operate on the basis of assigning an aggregate score to each display item based on the current score values of attribute data items associated with that display item” as the consumer profile update process analyzes each newly interpreted transaction, in particular, product or merchant profile, time of transaction and transaction amount to produce a refined profile. Typically, this process will depend on more than the current profile and the new transaction. It will probably also require the maintenance of aggregates and other summary data about the profile and transaction histories over various time intervals (column 11, lines 43-49).

As to claim 4

Kramer teaches

“the means for retrieval comprises means for generating a probabilistic function, such that the current aggregate score of a display item determines the probability of its selection” as in general, the greater the correlation between a consumer profile and a product profile at a given time, the greater will be the

expected appeal of the product to the consumer. An appeal function is a procedure that computes the appeal of a given product to a given consumer as a function of the consumer and product profiles. For example, an appeal function may be based on a generalized inner product of the consumer and appeal profile, e.g. a weighted sum of the results of multiplying each corresponding pair of characteristic values (column 11, lines 12-20).

Kramer further teaches the consumer attributes are updated by the relevancy of individual transactions. Relative relevancy of transactions and the probabilities of transactions occurring or not occurring may also be used to update the attributes (column 3, lines 34-37).

As to claims 5 and 17

Kramer teaches

“provision is made for users to input both positive and negative reward values” as when presenting a form to a user, TIC can treat it as a template in which the input fields of the form are treated as expressions which evaluate to the corresponding user data (column 9, lines 28-31).

Kramer also teaches the consumer attributes may be defined in a hierarchical model, with aggregated attributes having values derived from lower level attributes (either themselves aggregated, or base level attributes) (column 3, lines 22-25).

Kramer further teaches the characteristic values for an object will be represented as a vector of real numbers where each value measures the degree

to which the corresponding characteristic applies to the consumer or product (column 11, lines 1-4).

As to claim 6

Kramer teaches

“the data storage means comprises means for storing real value weights associating attribute data items with display items” as the consumer and viewer models are represented as weight vectors over component attributes while the consumer profile depends on all observations and transaction reports (column 15, lines 10-14).

Kramer further teaches when the aggregated attributes from the attribute vector are involved; the aggregated value is a weighted and normalized sum of a number of attribute values (column 28, lines 61-63).

As to claims 7 and 20

Kramer teaches

“The display includes non-visual elements” as the page illuminator operates on a parsed page. It generates a list of the illumination forms, i.e. the forms with XML tags specifying TIC illumination. It then passes that list to the selection engine, which is inside Page Illuminator, to choose the actual content (possibly the empty content) to substitute for each illumination form (column 17, lines 40-45).

Kramer further teaches the content may be any type of displayable content, including text, hypermedia, images, animations, audio, video, and the like (column 23, lines 38-40).

As to claim 8

Kramer teaches

“user profile generation and retrieval means for recording attribute data associated with inputs made by individual users and using the attribute data to initialize further sessions operated by the same users” as the consumer attributes may be defined in a hierarchical model, with aggregated attributes having values derived from lower level attributes (either themselves aggregated, or base level attributes). In this way arbitrarily complex queries can be evaluated against the model to target very specific consumers. The hierarchical model further allows recursive selection of conditional content, with initial selection of content using higher levels of aggregated attributes, and subsequent selection using a combination of lower levels of attributes on which the higher levels are based and consumer expression of interest in each level of selected content (column 3, lines 22-31).

As to claim 9

Kramer teaches

“A method of selecting items from a database” as a method, architecture and various software products that can augment structured documents that are

received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41).

“displaying a set of display items selected from a display database, storing attribute data items each associated with one or more of the display items” as display methods in an illumination process, which augments structured documents being electronically delivered to the consumer with the conditional content, allow for the consumer to view the most appropriate piece of content first, followed by the next most appropriate piece of content if the consumer so indicates, and so forth (column 3, lines 1-7).

Kramer further teaches the consumer attributes may be defined in a hierarchical model, with aggregated attributes having values derived from lower level attributes. In this way arbitrarily complex queries can be evaluated against the model to target very specific consumers (column 3, lines 22-27).

“storing a score value for each of the attribute data items, updating the display at intervals with new display items receiving an input identifying a first display item selected from the set of displayed items” as the Illumination Sorter then uses data from three data sources to do two things. First, it selects a set of illuminations that match either facts about the consumer in the database or the consumer's attribute vector well enough. Second, the Illumination Sorter sorts the selected illuminations in an order determined via a match score computed from the three data sources. The sorted illuminations are then presented to an Illumination Display subsystem for presentation to the consumer (column 21, lines 51-60).

“Receiving user input, during a browsing session, identifying a first display item selected from the set of displayed items

“retrieving, from the data-storage means, attribute data items associated with the display item identified in the user input, updating the score values of attribute data items in response to user input as said browsing session continues; and continuing to update the display at intervals using the updated score values of attribute data items to bias the selection process during said browsing session” as when presenting a form to a user, TIC can treat it as a template in which the input fields of the form are treated as expressions which evaluate to the corresponding user data (column 9, lines 28-31).

Kramer further teaches a method of updating a model of consumer attributes, comprising: retrieving a plurality of transactions; determining a measure of relevancy of each transaction to at least one attribute of a consumer responsive to a conditional probability of each transaction occurring given a value of the attribute; and updating the at least one attribute as a function of the relevancy of each of the plurality of transactions (claim 15).

Kramer does not explicitly teach the claimed limitation “receiving user input, during a browsing session”, “response to user input as said browsing session continues” and “selection process during said browsing session”.

Wang teaches

- Guidance defined during the edit session will define what and how information will be presented in derivative content. Derivative content is derived from primary content (e.g., for which the model page is a prototype)

by application of guidance defined during an edit session (page 26, paragraph 0159).

- A user may begin a session accessing the Internet via a wireless device and a limited display device user interface, indicate to the browse process that the session is to continue in audio, and possibly indicate to the audio user interface (e.g., voice browser) that the session is to resume on the limited display device. In an alternate implementation, session switching may include control from time to time by a workstation GUI (page 33, paragraph 0194).
- during a transfer of control, one or more of these access devices or user interfaces may have exclusive control of the session, or may have nonexclusive control (e.g., an input on any user interface is treated as an input for browsing and an output is provided in parallel on all access devices). Output may be provided exclusively to the interface being used in an exclusive manner, or may be provided as indicated by the user on two or more interfaces (page 33, paragraph 0195).
- Browse process responds to user inputs. The user may navigate the Internet in the conventional manner selecting links using user inputs. At any time, the user may desire to continue the session via an audio user interface. To do so, the user may follow a link provided on the limited display device by audio/LDD browse process (page 33, paragraph 0197).
- Compute a score for each candidate and choose the PC node identifier having the lowest score (page 11, paragraph 0096).

- Use of the directory information tree and access protocol facilitates obtaining guidance for the preparation of derivative content as a set of pages. A search for suitable guidance conducted by find guidance process may return a plurality of entries each having a suitable APPLIES_TO_ADDRESS attribute. Such a search may seek entries in accordance with one or more target attribute values (page 13, paragraph 0119).
- A weighted sum of the extents of matches found may be compared to a threshold numeric value. When the weighted sum exceeds the value, for example, sufficient correlation may be concluded. Probabilities derived from a model are combined in any conventional manner to conclude sufficiency. For example, if matches are found in portions associated with a low probability of change or mismatches are associated mostly with portions that have a high probability of change, sufficient correlation may be concluded (page 14, paragraph 0127).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Wang before him/her, to modify Kramer receiving user inputs and display items during a browsing session because that would allow for frequent changes in the arrangement of content on web pages provided by the Internet as taught by Wang (abstract).

As to claim 10

Kramer teaches

"the items selected for display are selected according to a process which uses the attribute data item scores to bias a probabilistic selection across the display items" as the consumer attributes are updated by the relevancy of individual transactions. Relative relevancy of transactions and the probabilities of transactions occurring or not occurring may also be used to update the attributes (column 3, lines 34-37).

As to claim 11

Kramer teaches

"each attribute data item has a score value which is altered as said browsing session continues according to user interaction with display items" as Illumination is the process of annotating or replacing sections of documents or other media with (possibly) related multimedia content. Typically the new content expands on the information in the original content and/or provides a more interesting presentation of the information (column 6, lines 22-26).

Kramer further teaches the maintenance of the consumer profile is an ongoing iterative process (column 11, lines 37-38).

Kramer does not explicitly teach the claimed limitation "each attribute data item has a score value which is altered as said browsing session continues".

Wang teaches

At a time after the session is established, voice browse process, performed by voice browser server, requests information expected to be provided

by a server on network. The initial request may correspond to a home page (page 6, paragraph 0054).

Wang also teaches a search may seek entries in accordance with one or more target attribute values (page 13, paragraph 0119).

Wang further teaches Compute a score for each candidate and choose the PC node identifier having the lowest score (page 11, paragraph 0096).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Wang before him/her, to modify Kramer browsing session continues in response to such user interaction because that would allow for frequent changes in the arrangement of content on web pages provided by the Internet as taught by Wang (abstract).

As to claim 12

Kramer teaches

“each display item is associated with a number of attribute data items, and where an aggregate score is created for that display item, using the score values of associated attribute data items” as the Illumination Sorter selects and sorts a set of illuminations by measuring each against the data sources, using the matching subsystem to compute a match score for each illumination. Illuminations whose match score is above a threshold associated with each illumination are selected; the selected illuminations are ordered by their match score to form the sorted illumination list (column 23, lines 15-22).

As to claim 13

Kramer teaches

“one or more of the display items may be selected using a probabilistic function, such that the aggregate score of claim 10 determines the probability of its selection” as each element in the attribute vector 808 represents a consumer preference, interest, psychographic, demographic aspect, or alternatively, the probability the consumer is interested in a specific topic, category, and the like. These attributes are updated as a function of a measure of relevancy of a transaction to each attribute (column 24, lines 41-46).

Kramer further teaches those illuminations with higher priorities will appear earlier in the sorted illumination list. If no data from the attribute vector is used in the matching process, the priority assigned to the query is the match score produced by the matching subsystem (column 23, lines 58-62).

As to claim 14

Kramer teaches

“user-generated reward values in respect of selected display items are used to generate associated score values for the attribute data items associated with the display item, the score values being used to create an aggregate score for associated display items and hence bias the probabilistic selection process” as this abstraction process may be repeated as needed at further levels of

abstraction, wherein one hierarchical vector is used as the base level vector for another hierarchical vector (column 22, lines 40-43).

Kramer also teaches each element in the attribute vector represents a consumer preference, interest, psychographic, demographic aspect, or alternatively, the probability the consumer is interested in a specific topic, category, and the like. These attributes are updated as a function of a measure of relevancy of a transaction to each attribute (column 24, lines 41-46).

Kramer further teaches the a priori probability values may be determined by statistical analysis of large amounts of blinded data, but are then used to refine specific consumer models (column 28, lines 53-55).

As to claim 15

Kramer teaches

“the attribute data items are associated with the display items using real-value weights which modify the generation of score values and the creation of an aggregate score” as the characteristic values for an object will be represented as a vector of real numbers where each value measures the degree to which the corresponding characteristic applies to the consumer or product (column 11, lines 1-4).

As to claim 16

Kramer teaches

“the changes to attribute data item score values are so arranged that the sum of score values across all attribute data items is zero” as the illumination contains a relevancy vector, to indicate which elements of the target vector are important. If an element of the relevancy vector is set to zero, the attribute represented by the element is of no interest in the matching; if set to 1, it is completely of interest. A relevancy vector value may vary between 0 and 1, indicating that the attribute is of any arbitrary level of interest (column 24, lines 17-24).

As to claim 18

Kramer teaches

“reward values may accrue not only to attribute data items associated with a display item selected by the user, but also to attribute data items associated with display items which were available for selection in competition with the selected item either by being simultaneously present on the display means or by having been recently displayed” as the range of selectable content for a web page or other structured document is unlimited. This application can be used for example to implement a personalized web based magazine where articles are chosen and presented according to the viewer's interests and preferences. This application can also be used to allow very accurate targeting and personalization of advertisements and other kinds of commercial offers (column 9, lines 18-25).

As to claim 19

Kramer teaches

“the reward accrued by attribute data items due to association with non-selected display items is negative where the selected display item reward is positive, and positive where the selected display item reward is negative” as when the aggregated attributes from the attribute vector are involved, the aggregated value is a weighted and normalized sum of a number of attribute values. FIGS. 13a and 13b depicts tables showing conditional probability metadata (column 28, lines 59-65; see also fig. 13A and 13B).

As to claim 21

Kramer teaches

“User profiles are generated using the attribute data associated with the selections made by individual users” as the consumer profile is continually updated with information extracted from electronically delivered structured documents and from consumer behavior such as selection of content, and thus reflects an accurate and current assessment of the consumer's interests, preferences, and demographics (column 3, lines 10-14).

As to claim 22

Kramer teaches

“a further set of display items exists which is not selectable by the user for amending the score values, the further display items being associated with attribute data items drawn from a set wholly or partly overlapping with the set of

attribute data items associated with the interactive display items, the further display items being selected, according to the associated attribute data items, for display on a separate display means, or on a separate part of the display means used for interactive display items” as the TIC client service evaluates the list of queries against the consumer model in the client database to select the most relevant selection and requests the targeted URL server to send the URL associated with the selection. The targeted URL server also logs the selection with the accounting server for accounting and billing purposes (column 19, lines 7-13).

Kramer also teaches client service gives control back to browser which displays the page by resolving the URLs placed by the client service. The content for these URLs are resolved from illumination servers (column 19, lines 13-17).

Kramer further teaches for given a illuminable element, factors influencing the choice might include the appeal of the content based on one or several active consumer models, frequency constraints or requirements for a given choice of content, vendor preferences of TIC, the owner of the page, and the owner of a given element (column 20, lines 44-49).

As to claim 23

Kramer teaches

“a user may initiate a further type of interaction, such as purchase or request for further information, by selection of display items” as the use of policies further extends the opportunities for controlled targeting of promotional

information, since each section of a structured document may have policies that differently influence the selection of content alternatives relative to a consumer's profile (column 7, lines 40-44).

Kramer further teaches in this way arbitrarily complex queries can be evaluated against the model to target very specific consumers. The hierarchical model further allows recursive selection of conditional content, with initial selection of content using higher levels of aggregated attributes, and subsequent selection using a combination of lower levels of attributes on which the higher levels are based and consumer expression of interest in each level of selected content (column 3, lines 25-32).

As to claim 25

Kramer teaches

"A computer program product directly loadable into the internal memory of a computer, comprising software code portions for performing the steps of the method of claim 9 when the product is run on a computer" as a local access device with local memory, computing capability, persistent storage, a display, and a network connection (column 5, lines 5-7).

As to claim 26

Kramer teaches

"A computer readable storage medium, tangibly embodying a program of instructions executable by a computer to perform steps" as the Java

programming language illustrate one embodiment for Bayesian updating by the mapping subsystem (column 25, lines 34-36).

“causing the computer to generate a display of a set of display items selected from a display database, causing the computer to store a set of attribute data items each associated with one or more of the display items; causing the computer to store a score value for each attribute data item; causing the computer to respond to an input made during a browsing session, identifying a first display item, selected from the currently displayed set, causing the computer to amend the score values in response to the input as said browsing session continues; causing the computer to retrieve, from the data-storage means, attribute data items associated with the display item identified in the user input, causing the computer to select one or more further display items in accordance with the score values associated with the retrieved attribute data items, and causing the computer to generate a display of the selected further display items during said browsing session” as the Illumination Sorter selects and sorts a set of illuminations by measuring each against the data sources, using the matching subsystem to compute a match score for each illumination. Illuminations whose match score is above a threshold associated with each illumination are selected; the selected illuminations are ordered by their match score to form the sorted illumination list (column 23, lines 15-22).

Kramer also teaches the variable content sections are tagged with variables or expressions, which are evaluated in the context of a client database

to produce a description of the actual content to display in that section (column 7, lines 60-63).

Kramer further teaches the database contains facts derived from the consumer's transactions, plus relevant metadata cached after retrieval from the metadata server. The mapping subsystem has updated the fields of the attribute vector, and the Boolean Abstractor provides additional Boolean functions that may be used in matching vectors associated with received conditional content against the consumer's attribute vector (column 23, lines 6-14).

Kramer does not explicitly teach the claimed limitation "causing the computer to respond to an input made during a browsing session", "Causing the computer to amend the score values in response to the input as said browsing session continues" and "display items during said browsing session".

Wang teaches

- Guidance defined during the edit session will define what and how information will be presented in derivative content. Derivative content is derived from primary content (e.g., for which the model page is a prototype) by application of guidance defined during an edit session (page 26, paragraph 0159).
- A user may begin a session accessing the Internet via a wireless device and a limited display device user interface, indicate to the browse process that the session is to continue in audio, and possibly indicate to the audio user interface (e.g., voice browser) that the session is to resume on the limited display device. In an alternate implementation, session switching may

include control from time to time by a workstation GUI (page 33, paragraph 0194).

- during a transfer of control, one or more of these access devices or user interfaces may have exclusive control of the session, or may have nonexclusive control (e.g., an input on any user interface is treated as an input for browsing and an output is provided in parallel on all access devices). Output may be provided exclusively to the interface being used in an exclusive manner, or may be provided as indicated by the user on two or more interfaces (page 33, paragraph 0195).
- Browse process responds to user inputs. The user may navigate the Internet in the conventional manner selecting links using user inputs. At any time, the user may desire to continue the session via an audio user interface. To do so, the user may follow a link provided on the limited display device by audio/LDD browse process (page 33, paragraph 0197).
- Compute a score for each candidate and choose the PC node identifier having the lowest score (page 11, paragraph 0096).
- Use of the directory information tree and access protocol facilitates obtaining guidance for the preparation of derivative content as a set of pages. A search for suitable guidance conducted by find guidance process may return a plurality of entries each having a suitable APPLIES_TO_ADDRESS attribute. Such a search may seek entries in accordance with one or more target attribute values (page 13, paragraph 0119).

- A weighted sum of the extents of matches found may be compared to a threshold numeric value. When the weighted sum exceeds the value, for example, sufficient correlation may be concluded. Probabilities derived from a model are combined in any conventional manner to conclude sufficiency. For example, if matches are found in portions associated with a low probability of change or mismatches are associated mostly with portions that have a high probability of change, sufficient correlation may be concluded (page 14, paragraph 0127).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Wang before him/her, to modify Kramer receiving user inputs and display items during a browsing session because that would allow for frequent changes in the arrangement of content on web pages provided by the Internet as taught by Wang (abstract).

As claims 27 and 30

Kramer teaches

“the display items are displayed, prior to receiving said user inputs, at random” as with the explicit permission of randomly selected consumers, consumer profiles can be fed back to the model in order to refine appeal profiles (column 11, lines 33-35).

Kramer further teaches various presentation orders may be used to determine the sequence in which the illuminations appear. In one embodiment, the content items are presented in random order (column 31, lines 30-33).

As to claims 28 and 31

The limitation therein has substantially the same scope as claim 27. Claims 28 and 31 are introduce the limitations of a system, method, architecture and various software products that can augment structured documents that are received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41). Therefore claims 28 and 31 are rejected for at least the same reasons as claim 27.

As to claims 29 and 32

The limitation therein has substantially the same scope as claim 27. Claims 29 and 32 are introduce the limitations of a local access device with local memory, computing capability, persistent storage, a display, and a network connection (column 5, lines 5-7). Therefore claims 29 and 32 are rejected for at least the same reasons as claim 27.

As to claim 33

Kramer teaches

"the sum of all score values remains the same value even after the score values are amended in response to the user inputs" as when presenting a form to

a user, TIC can treat it as a template in which the input fields of the form are treated as expressions which evaluate to the corresponding user data (column 9, lines 28-31).

Kramer also teaches an appeal function may be based on a generalized inner product of the consumer and appeal profile, e.g. a weighted sum of the results of multiplying each corresponding pair of characteristic values (column 11, lines 17-21).

Kramer further teaches when the aggregated attributes from the attribute vector 808 are involved, the aggregated value is a weighted and normalized sum of a number of attribute values (column 28, lines 61-63; see also figure 13 A and B).

As to claim 34

The limitation therein has substantially the same scope as claim 33. Claim 34 is introduce the limitations of a system, method, architecture and various software products that can augment structured documents that are received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41). Therefore claim 34 is rejected for at least the same reasons as claim 33.

As to claim 35

The limitation therein has substantially the same scope as claim 33. Claim 35 is introduce the limitations of a local access device with local memory,

computing capability, persistent storage, a display, and a network connection (column 5, lines 5-7). Therefore claim 35 rejected for at least the same reasons as claim 33.

6. Claims 1, 9 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (US Patent No. 6,327,574 B1) in view of Edlund et al. (US Patent Application No. 6,546,388 B1, hereinafter "Edlund").

As to claim 1

Kramer teaches

"Apparatus for selecting items from a product database" as a system, method, architecture and various software products that can augment structured documents that are received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41).

"a display database for storing a set of display items, data-storage means for storing attribute data items each associated with one or more of the display items" as the variable content sections are tagged with variables or expressions, which are evaluated in the context of a client database to produce a description of the actual content to display in that section (column 7, lines 60-63).

Kramer further teaches these selectable content tags will include information which is evaluated with respect to the individual consumer's profile to produce a set of options for which content to present together, with criteria for determining a measure of appropriateness of each option depending on the attributes of an individual viewer (column 8, lines 25-31).

“data-storage means for storing a score value for each attribute data item” as the Illumination Sorter selects and sorts a set of illuminations by measuring each against the data sources, using the matching subsystem to compute a match score for each illumination. Illuminations whose match score is above a threshold associated with each illumination are selected; the selected illuminations are ordered by their match score to form the sorted illumination list (column 23, lines 15-22).

“means for displaying a subset of the display items selected from the display database” as for each variable content section, selecting a subset of the content alternatives for augmenting the section by evaluating the content alternatives with respect to a consumer profile of the consumer, ordering the subset of content alternatives into an order (claim 1; see also figures 3B, 4 and 5).

Kramer further teaches display methods in an illumination process, which augments structured documents being electronically delivered to the consumer with the conditional content, allow for the consumer to view the most appropriate piece of content first, followed by the next most appropriate piece of content if the consumer so indicates, and so forth (column 3, lines 1-7).

“means for amending the score values in response to the user inputs; means for retrieving, from the data-storage means, attribute data items associated with any display item means for retrieving from the display database” as the primary purpose of the TIC data servers are to serve as a repository of software and domain specific data related to the subject matter of reports, such

as product descriptions and vendor contact information. These are represented as standard relational databases with standard web-based interfaces used to populate, query, and modify them. Specifically, there are four types of servers managed by the TIC operator (column 17, lines 53-60).

Kramer further teaches the Illumination Sorter sorts the selected illuminations in an order determined via a match score computed from the three data sources. The sorted illuminations are then presented to an Illumination Display subsystem for presentation to the consumer (column 21, lines 56-61).

“one or more further display items selected in accordance with the score values associated with attribute data items” as the Illumination Sorter includes a Boolean Matching and Metric Matching. The Boolean Matching evaluates the Boolean query used to select all illuminations that do meet the query constraints with respect to the facts in the database or abstracted data from the attribute vector via the Boolean Abstractor (column 23, lines 41-46).

“output means for displaying an output identifying the selected further display item or items” as all illuminations for which the Boolean query evaluates to TRUE are selected from the set of illuminations. The meaning of this result is that such illuminations do match facts or data descriptive of the transactions, interests, preferences, or demographics of the consumer whose computer will potentially be selected for display (column 23, lines 48-53).

Kramer also teaches the merchant chooses to make use of the hierarchical structure of the attribute vector to effect a hierarchical discrimination of its content. The first illumination candidates transmitted to the consumer's

computer. These illuminations will be processed by the Illumination Sorter to determine which categories are most relevant to the consumer. The most relevant illumination will be displayed initially in the illuminated document, with the selected ones of the remaining illumination candidates available to the consumer via the content rotator, and ordered by their relevancy (e.g. match scores) (column 32, lines 45-57).

Kramer further teaches the merchant is now aware of the consumer's interest in children's books, but still does not know which sub-category of children is appropriate. Thus, the second set of candidate illuminations is directed to specific sub-categories within the children category (column 33, lines 4-9).

Kramer does not explicitly teach the claimed limitation "means for receiving user inputs made during a browsing session", "means for amending the score values in response to the user inputs as said browsing session continues" and "output means for displaying an output identifying the selected further display item or items during said browsing session".

Edlund teaches

- When a user issues a search query, the actual query string is first passed to the Session Manager. A Session Manager is a component that keeps track of user sessions. It uses standard web technologies to store state and session information (column 5, lines 45-49).
- The primary function of the Session Manager is to interact with users. It receives search requests. It also handles requests for external resources from a search result page. The overall task is to identify users and

manage their sessions. This is necessary because the web architecture and its underlying HTTP protocol are stateless. There are several ways to manage sessions. For instance the Session Manager can make use of cookies, which is data in form of attribute-value pair, which can be stored within the user's viewer (web browser). The Session Manager decides, whether the request is a search request or a view request. In case of a search request, the user query is forwarded to the search engine.

Otherwise, a view request is forwarded to the Monitor Agent (column 5, lines 51-67).

- The search engine may be any kind of standard search engine. A search engine calculates the content relevance and return a list of search results ranked based on this content relevance (column 6, lines 9-12).
- When a user asks a query, the search engine returns a list of web pages weighted by the matching scores computed by the search engine (column 16, lines 9-11).
- The results of a search are displayed to a user in a hierarchically-structured subject directory. Some search engines give special weighting to words or keywords (column 2, lines 15-18).
- Using query manager data to interrogate a query database for matching query vector items, creating a popularity vector, sorting the popularity vector, making the sorted query vector items available to the user.

Intercepting search viewing requests and updating a query database based on session ID and resource associations (column 10, lines 30-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, having the teachings of Kramer and Edlund before him/her, to modify Kramer receiving user inputs and display items during a browsing session because that would allow a web searcher to assign a numerical weight to a word or string to influence the ranking of the search results as taught by Edlund (column 19, lines 25-27).

As to claim 9

The limitation therein has substantially the same scope as claim 1. Claim 9 is introduced by the limitations of a system, method, architecture and various software products that can augment structured documents that are received and reviewed online by a consumer using historical behavioral information (column 2, lines 38-41). Therefore claim 9 is rejected for at least the same reasons as claim 1.

As to claim 26

The limitation therein has substantially the same scope as claim 1. Claim 26 is introduced by the limitations of a local access device with local memory, computing capability, persistent storage, a display, and a network connection (column 5, lines 5-7). Therefore claim 26 is rejected for at least the same reasons as claim 1.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

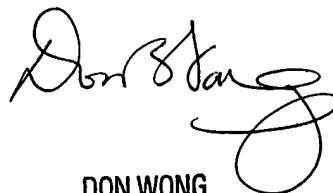
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Hwa whose telephone number is 571-270-1285. The examiner can normally be reached on 8:00 – 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only, for more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JH
12/3/2007



DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

James Hwa
Examiner
Art Unit 2163

